

Docket No.: 300.1158

Serial No. 10/827,318

REMARKS

In accordance with the foregoing, claims 1-4 have been amended and new claims 5-8, based on claims 1-4, respectively, have been added.

Favorable consideration of claims 1-8 is requested.

STATUS OF CLAIMS

Claims 1-4 were rejected in the preceding, first Office Action and the amended said claims 1-4, along with new claims 5-8, are pending herein.

ITEM 2: REJECTION OF CLAIMS 1-4 FOR ANTICIPATION UNDER 35 U.S.C. §102(e) BY ABE (PUBLICATION NO. US 2003/0136577)

The rejection is respectfully traversed.

Abe discloses that carbon fibers or the like are used in a core substrate of a circuit board so that the circuit board has a thermal expansion coefficient approximately the same as that of a silicon semiconductor chip mounted thereon.

However, Abe is silent about any laminate structure of resin layers on main surfaces of the core substrate. Whereas the Examiner cites Table 1 and the corresponding description of [0053], the same merely disclose respective thermal expansion coefficients of different materials and do not suggest anything about the strength or elongation of the materials or the laminate structure using layers of the materials. Moreover, Abe only considers a core substrate and does not consider any resin layers to be laminated on the substrate. It follows that Abe does not have any relevancy to a semiconductor device substrate in accordance with the present invention, which is comprised of a core substrate, on both main surfaces of which interconnect patterns are formed via resin layers and in which a resin layer, forming an outermost layer of the substrate on each of the main surfaces thereof, is formed using a material having at least one of a higher strength and a higher elongation than a resin material used for the inner resin layers in the substrate.

According to the present invention, the provision of the outermost resin layers on both main surfaces of a core substrate suppresses any thermal stress occurring between the core substrate and the inner resin layers, thereby to prevent cracking from occurring in the inner resin layers and the interconnect patterns.

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Therefore, a core substrate can be made of a material having a thermal expansion coefficient similar to that of a semiconductor chip to be mounted on the core substrate while ensuring provision of a semiconductor device substrate without occurrence of any troubles due to thermal expansion. Such an advantageous effect can be only achieved by the claimed feature of the present invention.

The advantage of the present invention cannot be obtained by simple selection from the materials disclosed in Abe, in which there is not any consideration about or suggestion of the laminate structure of resin layers on a core substrate, particularly about strength and elongation of the materials for the resin layers as employed in the present invention.

In accordance with the foregoing, it is respectfully submitted that the pending independent claims 1 and 5 as well as the further features set forth in the respective dependent claims 2 through 4 and 6 through 8 patentably distinguish over Abe.

CONCLUSION

It is respectfully submitted that the pending claims patentably distinguish over the reference and rejection of record. There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

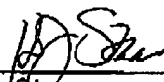
Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.


Respectfully submitted,

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Date: December 9, 2005

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